

Listing of the patent Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

1. (currently amended) A method for reusing Synchronous Code Division Multiple Access (S-CDMA) parameters to define Time Division Multiple Access (TDMA) minislot size, comprising the steps of:

determining S-CDMA parameters to create a S-CDMA-type upstream channel descriptor (UCD) message by a CMTS cable modem termination system (CMTS);

forwarding said S-CDMA-type UCD message to a modem operating in TDMA mode by said CMTS;

calculating a TDMA minislot size by said modem using said S-CDMA parameters;

calculating a frame duration value and a minislots per frame value;

using said frame duration value and said minislots per frame value to maintain a minislot counter and a frame counter; and

constructing a relationship between a system timestamp counter, said minislot counter and said frame counter via a timestamp snapshot.

2. (original) The method of claim 1, wherein said step of calculating said frame duration value and said minislots per frame value, said step of using said frame duration value and said minislots per frame value to maintain said minislot counter and said frame counter, and said step of constructing a relationship between said system timestamp counter, said minislot counter and said frame counter via said timestamp snapshot is

performed by both said CMTS and said modem;

3. (original) The method of claim 1, wherein said step of determining S-CDMA parameters comprises the steps of:

determining a modulation rate parameter;
determining a spreading intervals per frame (K) parameter;
determining a number of active codes parameter; and
determining a codes per minislot (Cms) parameter.

4. (original) The method of claim 3, wherein said minislot size is calculated by multiplying said K parameter by said Cms parameter.

5. (currently amended) The method of claim 3, wherein said frame duration value is calculated by multiplying a duration of spreading interval parameter by said K ~~parameter~~ parameter.

6. (original) The method of claim 3, wherein said minislots per frame value is calculated by dividing said number of active codes parameter by said Cms parameter.

7. (original) The method of claim 1, wherein said step of using said frame duration value and said minislots per frame value to maintain said minislot counter and said frame counter comprises the steps of:

incrementing said minislots counter by the number of said minislots per frame value each time a frame duration number of timestamp counts passes; and

incrementing said frame counter by 1 each time said frame duration number of timestamp counts passes.

8. (currently amended) A system for reusing Synchronous Code Division Multiple Access (S-CDMA) parameters to define Time Division Multiple Access (TDMA) minislots size, comprising:

means for determining S-CDMA parameters to create a S-CDMA-type upstream channel descriptor (UCD) message by a ~~CMTS~~ cable modem termination system (CMTS);

means for forwarding said S-CDMA-type UCD message to a modem operating in TDMA mode by said CMTS;

means for calculating a TDMA minislots size by said modem using said S-CDMA parameters;

means for calculating a frame duration value and a minislots per frame value;

means for using said frame duration value and said minislots per frame value to maintain a minislots counter and a frame counter; and

means for constructing a relationship between a system timestamp counter, said minislots counter and said frame counter via a timestamp snapshot.

9. (original) The system of claim 8, wherein said means for calculating said frame duration value and said minislots per frame value, said means for using said frame

duration value and said minislots per frame value to maintain said minislot counter and said frame counter, and said means for constructing a relationship between said system timestamp counter, said minislot counter and said frame counter via said timestamp snapshot is provided by both said CMTS and said modem.

10. (original) The system of claim 8, wherein said means for determining S-CDMA parameters comprises:

- means for determining a modulation rate parameter;
- means for determining a spreading intervals per frame (K) parameter;
- means for determining a number of active codes parameter; and
- means for determining a codes per minislot (Cms) parameter.

11. (original) The system of claim 10, wherein said minislot size is calculated by multiplying said K parameter by said Cms parameter.

12. (currently amended) The system of claim 10, wherein said frame duration value is calculated by multiplying a duration of spreading interval parameter by said K ~~parameter~~ parameter.

13. (original) The system of claim 10, wherein said minislots per frame value is calculated by dividing said number of active codes parameter by said Cms parameter.

14. (original) The system of claim 8, wherein said means for using said frame

duration value and said minislots per frame value to maintain said minislot counter and said frame counter comprises:

means for incrementing said minislot counter by the number of said minislots per frame value each time a frame duration number of timestamp counts passes; and

means for incrementing said frame counter by 1 each time said frame duration number of timestamp counts passes.